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U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

ENZ-1 (Cont.)

SERIAL NO.

130,070

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

Information Disclosure Statement

Filed By Applicant
(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA 3328389	6/27/67	Shimizu et al.	260	211.5	
	AB 3337530	8/22/67	Hanze	260	211.5	
	AC 3338882	8/29/67	Wechter	260	211.5	
	AD 3804826	4/10/74	Schelt et al.	260	211.5R	
	AE 3893998	7/3/75	John A. Secrist III et al.	260	211.5R	
	AF 3915958	10/28/75	Shuman et al.	260	211.5R	
	AG 3917583	11/4/75	Meyer et al.	260	211.5R	
	AH 3960840	6/1/76	John A. Secrist III et al.	260	211.5R	
	AI 3968101	7/6/76	Christensen et al.	260	211.5R	
	AJ 4008363	2/15/77	Ludians Re et al.	536	28	
	AK 4038480	2/26/77	Robins et al.	536	27	

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	AL 2618419	11/4/75	German Offenlegungsschrift	2			X
	AM 2618511	11/4/76	German Offenlegungsschrift	2			X
	AN 3045375	7/1/82	German Offenlegungsschrift	3			X
	AO 2019408	10/31/79	United Kingdom Pat. Appln.	3			
	AP 2026690	2/6/80	United Kingdom Pat. Appln.	3			

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. G. J. Bauman et al., "A New Method for Fluorescence Microscopical Localization of Specific DNA Sequences by In Situ Hybridization of Fluorochrome-Labeled RNA", <u>Exp. Cell Res.</u> , 128, pp. 485-90 (1980) ["Bauman I"]
AS	
AT	J. G. J. Bauman et al., "Rapid and High Resolution Detection of in situ Hybridisation to Polytene Chromosomes Using Fluorochrome-Labeled RNA", <u>Chromosoma (Berl.)</u> 84, pp. 1-18 (1981) ["Bauman II"]

EXAMINER

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AA	4 0 4 8 3 0 7	9/13/77	Yokota et al.	424	180	
AB	4 0 8 6 4 1 7	4/25/78	Ishida et al.	536	29	
AC	4 0 8 8 6 3 9	5/9/78	Zappelli et al.	260	112.5R	
AD	4 0 9 6 3 2 4	6/20/78	Kelly et al.	536	23	
AE	4 1 3 4 7 9 2	1/16/79	Boguslaski et al.	195	99	
AF	4 1 5 1 3 4 9	4/24/79	Traeger et al.	536	28	
AG	4 1 7 1 4 3 2	10/16/79	Carrico et al.	536	26	
AH	4 2 1 3 8 9 3	7/22/80	Carrico et al.	260	112.5	
AI	4 2 2 8 2 3 7	10/14/80	Hevey et al.	435	7	
AJ	4 2 3 0 6 9 8	10/28/80	Borek et al.	424	180	
AK	4 2 3 0 7 9 7	10/28/80	Boguslaski et al.	435	7	

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FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL 2 0 3 4 3 2 3	6/4/80	United Kingdom Pat. Appln.	3		
AM 2 0 4 1 9 2 2	9/17/80	United Kingdom Pat. Appln.	3		
AN 2 0 4 5 2 3 9	10/29/80	United Kingdom Pat. Appln.	3		
AO 2 1 2 5 9 6 4	3/14/84	United Kingdom Pat. Appln.	3		
AP 0 7 0 6 8 5	1/26/83	EPO Patent Application	3		

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

E. A. Bayer and M. Wilchek, "The Use of the Avidin-Biotin Complex as a Tool in Molecular Biology," in Methods of Biochemical Analysis, 26, pp. 1-45 (1980)

D. Bergstrom and M. Ogawa, "C-5 Substituted Pyrimidine Nucleosides. 2. Synthesis Via Olefin Coupling To Organopalladium Intermediates Derived From Uridine and 2'-Deoxyuridine, J. Am. Chem. Soc., 100, pp. 8106-8112 (1978) ["Bergstrom I"]

EXAMINER

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AA	4 2 4 7 5 4 4	1/27/81	Bergstrom et al.	424	180	
AB						
AC	4 2 6 1 8 9 3	4/14/81	Boguslaski et al.	260	326N	
AD	4 2 6 7 1 7 1	5/12/81	Bergstrom et al.	424	180	
AE	4 3 0 2 2 0 4	11/24/81	Wahl et al.	23	230.3	
AF	4 3 1 8 9 8 0	3/9/82	Boguslaski et al.	435	7	
AG	4 3 1 8 9 8 1	3/9/82	Burd et al.	435	7	
AH	4 3 1 8 9 8 2	3/9/82	Hornby et al.	435	7	
AI	4 3 5 5 1 6 5	10/19/82	Boguslaski et al.	544	237	
AJ	4 3 5 8 5 3 5	11/9/82	Falkow et al.	435	5	
AK	4 3 6 3 7 5 9	12/14/82	Boguslaski et al.	260	112.7	

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL 7 0 6 8 7	1/26/83	EPO Patent Application	3		
AM 1 5 4 8 7 4 1	7/18/79	Great Britain Patent	2	33/16	
AN 1 5 5 2 6 0 7	9/18/79	Great Britain Patent	2	33/16	
AO 4 3 2 4 1 9 1	10/18/43	Japanese Patent Application	16E	611.2	X
AP 5 8 6 2 1 9 4	4/13/83	Japanese Patent Application	3C07H	19/06	X

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	D. Bergstrom and J. L. Ruth, "Properties of C-5 Mercurated Pyrimidine Nucleosides," <u>J. Carbohydrates, Nucleotides and Nucleosides</u> , 4, pp. 257-289 (1977) ["Bergstrom II"]
AS	C. F. Bigge et al., "Palladium-Catalyzed Coupling Reactions of Uracil Nucleosides and Nucleotides," <u>J. Am. Chem. Soc.</u> , 102, pp. 2033-2038 (1980)
AT	C. Brandon et al., "Structure of a New Pyrimidine from <u>Bacillus Subtilis</u> Phage SP-15 Nucleic Acid", <u>Nature New Biology</u> , 239, pp. 70-71 (1972)

EXAMINER

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AA	4 3 7 4 9 2 5	2/22/83	Litman et al.	435	7	
AB	4 3 8 0 5 8 0	4/19/83	Boguslaski et al.	435	7	
AC	4 3 8 3 0 3 1	5/10/83	Boguslaski et al.	435	7	
AD	4 4 4 6 2 3 1	5/1/84	Self	435	7	
AE	4 4 6 9 8 6 3	9/4/84	Ts'o et al.	536	27	
AF	5 7 2 0 0 8	4/28/75	Boguslaski et al. *			
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FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
AL	8 3 0 2 2 7 6	7/7/83	FCT Patent Application	3C07H	19/20	X**	
AM	8 3 0 2 2 7 7	7/7/83	FCT Patent Application	3C07H	21/00	X**	
AN	8 3 0 2 2 8 6	7/7/83	FCT Patent Application	3C12Q	1/68	X**	
AO							
AP							

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	T. R. Broker et al., "Electron Microscopic Visualization Of tRNA Genes with Ferritin-Avidin: Biotin Labels," <u>Nucl. Acids Res.</u> , 5, pp. 363-83 (1978)
AS	R. M. K. Dale et al., "Direct Covalent Mercuration of Nucleotides and Polynucleotides," <u>Biochemistry</u> , 14, pp. 2447-2457 (1975) [Dale I]
AT	

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* United States patent application
** Abstract only.

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AL							
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Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	R. M. K. Dale et al., "The Synthesis and Enzymatic Polymerization of Nucleotides Containing Mercury: Potential Tools for Nucleic Acid Sequencing and Structural Analysis, Proc. Natl. Acad. Sci. USA, 70, pp. 2238-2242 (1973)
AS	W. S. Dallas and S. Falkow, "Molecular and Genetic Analysis of a DNA Sequence Encoding for Enterotoxin Synthesis in Escherichia Coli," Thirteenth Joint Conference on Cholera, The U.S.-Japan Cooperative Medical Science Program (1979) ["Dallas I"]
AT	

EXAMINER

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FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
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AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	W. S. Dallas et al., "The Characterization of an Escherichia Coli Plasmid Determinant That Encodes for the Production of a Heat-Labile Enterotoxin," <u>Plasmids of Medical Environmental and Commercial Importance</u> , K. N. Timmis and A. Puhler, editors, Elsevier/North-Holland Biomedical Press (1979) ["Dallas II"]
AS	
AT	D. J. Eckermann and R. H. Symons, "Sequence at the Site of Attachment of an Affinity-Label Derivative of Puromycin on 23-S Ribosomal RNA of <u>Escherichia coli</u> Ribosomes," <u>Eur. J. Biochem.</u> , 82, pp. 225-34 (1978)

EXAMINER

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AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	M. Ya. Feldman, Reactions of Nucleic Acids and Nucleoproteins With Formaldehyde, Ed. (19__)
AS	H. G. Gratzner, "Monoclonal Antibody to 5-Bromo- and 5-Iododeoxyuridine: A New Reagent for Detection of DNA Replication," Science, 218, pp. 474-475 (1982)
AT	M. Grunstein and D. Hogness, "Colony Hybridization: A Method for the Isolation of Cloned DNAs That Contain a Specific Gene", Proc. Natl. Acad. Sci. USA, 72, pp. 3961-65 (1975)

EXAMINER

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	AL											
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	AO											
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Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. L. Guesdon et al., "The Use of Avidin-Biotin Interaction In Immunoenzymatic Techniques", <u>J. Histochem. and Cytochem.</u> 27, pp. 1131-39 (1979)
AS	H. Hayashi and K. Nakanishi, "Synthesis and Absolute Configuration of (+)-5-(4',5'-Dihydroxypentyl)uracil from <u>Bacillus Subtilis</u> Phage SP-15 Deoxyribonucleic Acid," <u>J. Am. Chem. Soc.</u> , 95, pp. 4081-4083 (1973) [Hayashi I]
AT	H. Hayashi et al. "Structure and Synthesis of Dihydroxypentyluracil from Bacteriophage SP-15 Deoxyribonucleic Acid," <u>J. Am. Chem. Soc.</u> , 95, pp. 8749-8757 (1973) [Hayashi II]

EXAMINER

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AL					
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AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	K. Hofmann et al., "Iminobiotin Affinity Columns And Their Application To Retrieval Of Streptanidin", <u>Proc. Natl. Acad. Sci. USA</u> , 77, pp. 4666-68 (1980)
AS	E. S. Huang and J. S. Pagano, "Nucleic Acid Hybridization Technology and Detection of Proviral Genomes," <u>Methods Virol</u> , 6, pp. 457-497 (1977)
AT	A. M. Jeffrey et al., "Benzo[a] pyrene-Nucleic Acid Derivative Found In Vivo: Structure of a Benzo[a] pyrenetetrahydrodiol Epoxide-Guanosine Adduct," <u>J. Am. Chem. Soc.</u> , 98, pp. 5714-5715 (1976)

EXAMINER

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Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	R. G. Kallen et al., "The Occurrence of a New Pyrimidine Base Replacing Thymine in a Bacteriophage DNA: 5-Hydroxymethyl Uracil," <u>J. Mol. Biol.</u> 5, pp. 248-250 (1962)
AS	D. E. Kennel, "Principles And Practicss of Nucleic Acid Hybridization" <u>Pro. Nucl. Acid Res.</u> , 11, 259-301 (1971)
AT	M. Koreeda et al., "Alkylation of Polyguanylic Acid at the 2-Amino Group and Phosphate by the Potent Mutagen (\pm)-7B, 8a-Dihydroxy-9 β ,10 β epoxy -7,8,9,10-tetrahydrobenzo[a]pyrene," <u>J. Am. Chem. Soc.</u> , 98, pp. 6720-6722 (1976)

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AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	T. T. Kuo et al., "5-Methylcytosine Replacing Cytosine in the Deoxyribonucleic Acid of a Bacteriophage for Xanthomonas oryzae," J. Mol. Biol., 34, pp. 373-375 (1968)
AS	
AT	P. R. Langer et al., "Enzymatic Synthesis of Biotin-Labeled Polynucleotides: Novel Nucleic Acid Affinity Probes", Proc. Natl. Acad. Sci. USA, 78, pp. 6633-37 (1981) ["Langer I"]

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AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	P. R. Langer and D. C. Ward, "A Rapid and Sensitive Immunological Method For In Situ Gene Mapping," in <u>Developmental Biology Using Purified Genes</u> , ed. D. D. Brown, Academic Press, pp. 647-58 (1981) ["Langer II"]
AS	
AT	P. R. Langer and D. C. Ward, Abstract 1153: "A Rapid and Sensitive Immunological Method For In Situ Gene Mapping," in <u>Journal of Supramolecular Structure and Cellular Biology</u> , ed. Alan R. Liss, Inc. (1981) ["Langer III"]
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AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	I. R. Lehman and E. A. Pratt, "On the Structure of the Glucosylated Hydroxymethylcytosine Nucleotides of Coliphages T2, T 4 and T6," <u>J. Biol. Chem.</u> 235, pp. 3254-3259 (1960)
AS	E. T. Maggio (ed.), <u>Enzyme-Immunoassay</u> (1980)
AT	Manning et al., "A Method for Gene Enrichment Based on the Avidin-Biotin Interaction. Application to the <u>Drosophila</u> Ribosomal RNA Genes," <u>Biochemistry</u> , 16, pp. 1364-1370 (1977) [Manning I]
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AL					
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Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J: E. Manning et al., "A New Method Of <u>in situ</u> Hybridization," <u>Chromosoma</u> (Berl), 53, pp. 107-117 (1975) [Manning II]
AS	J: Marmur et al., "Unique Properties of Nucleic Acid from <u>Bacillus Subtilis</u> Phage SP-15, <u>Nature New Biology</u> , 239, pp. 68-70 (1972)
AT	

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FOREIGN PATENT DOCUMENTS

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AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	T. W. Munns and M. K. Liszewski, "Antibodies Specific for Modified Nucleotides: An Immunochemical Approach for the Isolation and Characterization of Nucleic Acids," in <u>Progress in Nucleic Acid Research and Molecular Biology</u> , ed. W. E. Cohn, Academic Press, 24, pp. 109-165 (1980)
AS	
AT	T. Nelson and D. Brutlag, "Addition of Homopolymers to the 3' - ends of Duplex DNA with Terminal Transferase," <u>Methods in Enzymology</u> (Vol. 68) <u>Recombinant DNA</u> , ed. R. Wu, pp. 41-50

EXAMINER

DATE CONSIDERED

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FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	M. Pellegrini et al., "Application of the Avidin-Biotin Method of Gene Enrichment to the Isolation of Long Double-Stranded DNA Containing Specific Gene Sequences", <u>Nucl. Acids Res.</u> 4, pp. 2961-73 (1977)
AS	
AT	J. Reiser et al., "Transfer of Small DNA Fragments From Polyacrylamide Gels to Diazobenzoyloxymethyl Paper and Detection by Hybridization With DNA Probes," <u>Biochemical and Biophysical Research Communications</u> , 85, pp. 1104-1112 (1978)

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	P. W. J. Rigby et al., "Labeling Deoxyribonucleic Acid to High Specific Activity In Vitro by Nick Translation with DNA Polymerase I," J. Mol. Biol., 113, pp. 237-251 (1977)
AS	
AT	G. T. Rudkin and R. D. Stollar, "High Resolution Detection of DNA-RNA Hybrids in situ by Indirect Immunofluorescence, Nature, 265, pp. 472-473 (1977)

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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AUG 10 1989

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. L. Ruth and D. E. Bergstrom, "C-5 Substituted Pyrimidine Nucleosides. 1. Synthesis of C-5 Allyl, Propyl, and Propenyl Uracil and Cytosine Nucleosides via Organopalladium Intermediates," <u>J. Org. Chem.</u> , 43, pp. 2870-2876 (1978)
AS	
AT	M. So, "Characterization of an <u>Escherichia coli</u> Plasmid Encoding for the Synthesis of Heat-Labile Toxin: Molecular Cloning of the Toxin Determinant", <u>Infection and Immunity</u> 21, pp. 405-411 (1978)

EXAMINER

DATE CONSIDERED

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GROUP

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AUG 10 1989

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
					YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	A. Sodja and N. Davidson, "Gene Mapping and Gene Enrichment by the Avidin-Biotin Interaction: Use of Cytochrome-C as a Polyamine Bridge," <u>Nucl. Acids Res.</u> , 5, pp. 383-399 (1978)
AS	
AT	M. Swierkowski and D. Shugar, "Poly 5-Ethyluridylic Acid, A Polyuridylic Acid Analogue", <u>J. Mol. Biol.</u> , 47, pp. 57-67 (1970)

EXAMINER

DATE CONSIDERED

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